## REMARKS

### 1. Specification Amendment

Applicant has amended paragraph 8 to correct the spelling of the word "addtion" (sic). No new matter has been added.

### 2. Claims Amendments

Claims 1-15, 21 and 22 generally have been amended to correct minor typographical errors, to clarify the relation between the steps, and to provide the proper antecedent basis for elements.

Claim 21 has been amended to capture embodiments in which the finished thickness metal composite foil is processed with a flat foil into a honeycomb-like structure having channels for air flow. Support for this claim can be found in Paragraph 9.

Claims 20 and 23, previously withdrawn, have been canceled.

New Claim 25 has been added to capture other embodiments of the invention. Support this claim can be found in Paragraphs 8, 9, and 12.

New Claim 26 has been added to capture embodiments in which the heating step is the only diffusion step. Support this claim can be found in Paragraph 12.

No new matter has been added by any of these amendments.

### 3. 35 USC 103

Claims 1-15, 21 and 22 have been rejected under 35 USC 103 as being obvious over US Patent No. 6224691 to Maus (Maus '691) in view of US Patent No. 5366139 to Jha (Jha '139). Applicant respectfully traverses this rejection.

Initially, Maus '691 discloses a method for forming a honeycomb body comprising providing sheet metal containing a laminate material with a layer of chromium-containing steel and a layer containing aluminum; forming a layered sheet metal honeycomb body with structured sheet metal layers defining passages through which a fluid can flow; and subjecting the honeycomb body to heat treatment and substantially homogenizing the laminate material by diffusion. In Maus '671, the foil is corrugated and combined with another corrugated sheet

having the microsctures (10) to allegedly improve the elasticity of the over product. The product then is placed into a casing for corrosion resistance.

Further, Jha '139 teaches a metal foil substrate in which layers of ferritic stainless steel and aluminum are bonded together as a composite steel. While Jha '139 does disclose the use of heat to treat layers, Jha '139 does not disclose a treatment of a composite after it is been processed into a honeycomb-like structure. Further Jha '139 does not disclosure a method in which the composite is diffused into a foil.

The examiner has not shown that this combination of references teaches a method for making a ferrous metal foil, as claimed in Claim 1, comprising, *inter alia*,; heating the honeycomb-like structure near or at an annealing temperature in an air atmosphere for a period of time to cause diffusion of the first layer and the at least two layers to produce a monolithic honeycomb-like annealed alloy foil structure. Nothing in Jha '139 or Maus '691 suggests that a honeycomb like structure can be produced by heating the structure until diffusion. Maus '691. Further, Maus '691 notes that the structure already has a high level of corrosion resistance (Col 6, lines 20-25), which teaches away from another step of annealing the structure in an air atmosphere. As such, the combination of art does not teach Claim 1.

Referring now to Claim 13, the combined cited art does not teach a method in which the annealing temperature is between about 900° C and 1,200° C and the honeycomb-like structure is heated for about 2 hours. While the examiner is correct in that annealing is dependant on thickness, it is important to point out the thickness may not be inherently different per se. More particularly, because the heating step in Jha '139 is not intended for diffusion of the composite with another layer, one of ordinary skill would not ordinarily combine this temperature range with the method in Maus '671. That is Maus '671 would not utilize a diffusion step for about 2 hours without some type of motivation.

Referring now to Claim 21, the combined cited art does not teach a method in which a composite is bound to a flat foil. As Maus '671 discloses a foil with microstructures, one with skill in the art would not modify Maus '671, without some type of motivation, to create a composite bound to a flat foil. Nothing in Jha '139 suggests that a flat foil could be combined with a composite of the type in Claim 21.

Referring now to new Claim 25, the combined cited art does not teach a method in which the honeycomb-like structure is heated in an air atmosphere at an annealing temperature so to

produce a monolithic honeycomb-like annealed alloy foil structure with a pre-oxidized surface. While Jha '139 does indicate that heating can be used improve the oxidation resistance of the composite, Jha '139 does not suggest that a honeycomb-like structure would be heated to create a aluminum oxide surface. As Maus '671 is silent on the formation of an aluminum oxide surface, one of ordinary skill in the art would not develop the method in Claim 25 based on the cited art.

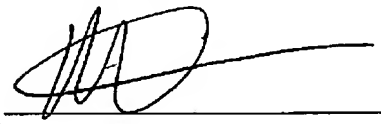
Accordingly, Applicant submits that Claims 1-15, 21 and 22[1] are not obvious over the prior art and respectfully requests that the examiner withdraw the rejections to Claims 1-15, 21 and 22.

[1] The dependant claims are allowable once the independent claims are allowable.

## CONCLUSION

Applicants submit that the patent application is in condition for allowance and respectfully request such action. If the examiner has any questions that can be answered by telephone, please contact the patent attorney of record at the address and telephone number listed below.

Respectfully submitted,
SMITH, GAMBRELL & RUSSELL, LLP



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